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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
00/814,403	03/22/2001	Yihua Chang	11302-1190 (44040-256047)	3830
29843	7590	01/23/2004	EXAMINER	
JOHN S. PRATT KILPATRICK STOCKTON LLP (KIMBERLY CLARK) 1100 PEACHTREE STREET SUITE 2800 ATLANTA, GA 30309			WILSON, DONALD R	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/814,403

Applicant(s)

CHANG ET AL

Examiner

Donald R Wilson

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory maximum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-9, 11-15 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-3, 11-15 and 18-20 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/06/03
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other.

**DETAILED ACTION**

**Status of Application**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/6/03 has been entered.
2. Applicant's election without traverse of the inventions of Group 1, now Claims 1-3, 11-15 and 18-20, in Paper No. 7, and the species of, a copolymer of [2-(methacryloyloxy)ethyl]trimethylammonium chloride as the cationic polymer, and ethylene/vinyl acetate copolymer as the co-binder polymer, in Paper No. 11, remains in effect. Claims 1-3, 11-15 and 18-20 are under consideration and Claims 6-9 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

**Response to Amendment**

3. Applicant's amendment filed 11/6/03, has been fully considered with the following results.
4. The duplicate claim warning of Claim 21 is obviated by the amendment and the warning is withdrawn.
5. The objection to new matter and the corresponding rejection of claims under 35 U.S.C. § 112, first paragraph, is not overcome by the amendment and the objection and rejection are maintained for reasons discussed below.
6. The amendment overcomes the rejections of claims under 35 U.S.C. § 112, second paragraph, and the rejection is withdrawn, except in regards to the indefiniteness of the term "hydrophilic" and in this regard the rejection is maintained for reasons stated below.
7. The amendment also overcomes the rejection based upon the previously applied prior art and the rejection of claims over Larson'007, or Larson'841 is withdrawn.

**Previously Cited Statutes**

Art Unit: 1713

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

**Objection to New Matter**

9. ~~The amendment filed 4/21/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure.~~ The basis of this objection was stated in Detailed Action § 7 of the previous

Office Action.

10. The added material which is not supported by the original disclosure is as previously stated:

"There appears to be no basis in the specification as filed for the cationic polymer comprising cationic monomer units, water insoluble, hydrophobic monomeric units, hydrophilic monomeric units, and water-soluble nonionic monomeric units, as is currently recited in Claim 13. The Examiner acknowledges a basis for cationic polymers comprising cationic monomer units, water insoluble, hydrophobic monomeric units, and hydrophilic monomeric units, or water-soluble nonionic monomeric units."

11. Applicant traverses the objection pointing out the following citations from the specification:

a. "At p. 14, lines 19-22, the specification states: The ion-specific cationic polymers of the present invention comprise 1) a cationic monomer, 2) at least one water insoluble, hydrophobic monomer, and optionally, 3) a hydrophilic and/or water-soluble nonionic monomer. (emphasis added)."

b. "In addition, at p. 15, lines 9-14, the specification lists substances that can be used as a "hydrophilic and/or water-soluble nonionic monomer" (emphasis added)."

This is not deemed to be persuasive because the citations do not recite or teach "hydrophilic monomers and/or water-soluble nonionic monomers", but rather only teaches a monomer which is "hydrophilic and/or water soluble." The listing at p 15, lines 9-14, only discloses a list of monomers which are hydrophilic and/or water-soluble, which applies to each of the monomers.

12. Applicant is required to cancel the new matter in the reply to this Office Action.

**Claim Rejections - 35 USC § 112, First Paragraph**

13. ~~Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.~~ The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The subject matter in question is the new matter just discussed. The basis of this rejection was stated in Detailed Action § 9 of the previous Office Action. Applicant traverses the rejection for the same reason discussed above in

Art Unit: 1713

regards to the objection to new matter. The traversal is not deemed to be persuasive for the above reasons.

**Claim Rejections - 35 USC § 112, Second Paragraph**

14. ~~Claims 11 and 13-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.~~ The basis of this rejection was stated in Detailed Action § 13 of the previous Office Action. Claims 11 and 13 are indefinite because "hydrophilic" is a relative term, the metes and bounds cannot be determined. Applicant traverses the rejection providing a dictionary definition, pointing out that it is a widely used term, and that the term is typically presented in contrast to the term hydrophobic. However, this is not the issue at hand. There are two separate requirements set forth in the § 112, second paragraph:

- (A) the claims must set forth the subject matter that applicants regard as their invention; and
  - (B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.
- See M.P.E.P. § 2171. (underlining added.)

It remains that "hydrophilic monomer" is a relative term, which without more leaves uncertainty as to whether a number of monomers are included or excluded as hydrophilic or hydrophobic. For instance, acrylamido monomers are taught by applicant to be hydrophobic monomers, yet other amide containing polymers such as various acrylamides and vinylpyrrolidone are taught to be hydrophilic monomers (see specification page 15). Where is the dividing line between hydrophilic and hydrophobic amide containing monomers? Alkyl vinyl ethers might be considered to be either hydrophilic or hydrophobic monomers depending on one's reference point. Polyethylene glycol (meth)acrylates are taught to be hydrophilic monomers in the specification. The methyl ethers of polyethylene glycol (meth)acrylates would be more hydrophobic and less hydrophilic but it cannot be told whether or not these are to be considered hydrophilic or hydrophobic. With this uncertainty it remains that the metes and bounds of hydrophilic monomers cannot be determined.

*Claim Rejections - 35 USC § 102(b)/§ 103(a)*

15. ~~Claims 1-3, 11-15 and 18-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 98/62698 (hereinafter WO'698).~~

16. In Example 1, WO'698 discloses film forming compositions comprising a polystyrene seed polymer around which is polymerized a cationic copolymer comprising a cationic monomer (instantly elected specie of [2-(meth-acryloyloxy)ethyl]trimethylammonium chloride), a water insoluble hydrophobic monomer (butyl acrylate or methyl acrylate) and a hydrophilic or water-soluble monomer (methacrylic acid). The polystyrene would clearly be a discontinuous phase as made or when converted to a film. In regards to the formulation being insoluble in an aqueous solution containing 0.5 wt.% divalent metal salt, and being dispersible in water containing up to about 200 ppm of one or more mono or multivalent ions, these would appear to be inherent properties of the composition, i.e., if the same cationic copolymers have this property in the instant invention, then it is reasonable to expect that they have the same properties in the invention of WO'698.

It has been held that where applicant claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the examiner has explained why the function, property or characteristic is considered inherent in the prior art, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *in re Fitzgerald et al.*, 205 USPQ 594, 596 (CCPA 1980).

17. ~~Claims 1-3, 11-15 and 18-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP'983.~~ The English language abstract, and a machine translation have been used as an interpretation of JP'983. The machine translation is attached.

18. JP'983 discloses compositions containing styrene copolymers of various dialkylamino (meth)acrylamides which are quaternized and then used as a dispersant and emulsifying agent for the polymerization of styrene/acrylate ester polymers. See abstract, Examples and Table 1. Styrene is a hydrophobic, water insoluble monomer, and amino(meth)acrylamide monomers would be cationic, hydrophilic, and water-soluble. Clearly the styrene/acrylate ester copolymers are a discontinuous phase. As above, in regards to the formulation being insoluble in an aqueous solution containing 0.5 wt.% divalent metal salt, and being dispersible in water containing up to about 200 ppm of one or more mono

Art Unit: 1713

or multivalent ions, it is reasonable to expect that these are inherent properties of the JP'610 formulations.

***Allowable Subject Matter***

19. No prior art has been identified which discloses or suggests the instantly claimed invention containing the elected species of, (i) a cationic polymer, i.e., a copolymer of [2-(methacryloyloxy)ethyl]-trimethylammonium chloride, as a continuous phase, and (ii) a co-binder polymer, i.e., ethylene/vinyl acetate copolymer, as a discontinuous phase. The search was extended to other species resulting in the above rejections.

***Other Comments***

20. Previously cited Gray is not applied as prior art as it isn't seen that the cationic copolymers contain hydrophobic water insoluble comonomers. EP'284 is not applied as prior art because it isn't seen to have a co-binder polymer as a discontinuous phase.

***Future Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R Wilson whose telephone number is 571-272-1113.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications. The unofficial direct fax phone number to the Examiner's desk is 571-273-1113.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.



Donald R Wilson  
Primary Examiner  
Art Unit 1713

attach: machine translation of JP'983.